

No.

200700019



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

West Bred, LLC

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Chico'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this seventh day of December, in the year two thousand and seven.

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER WestBred, LLC		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME DA 593-078		3. VARIETY NAME Chico	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 81 Timberline Drive Bozeman, MT 59718		5. TELEPHONE (include area code) 406-587-1218		<b>FOR OFFICIAL USE ONLY</b> PVPO NUMBER 200700019 FILING DATE OCTOBER 27, 2006	
		6. FAX (include area code) 406-586-8247			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Limited Liability Corporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION Arizona		9. DATE OF INCORPORATION August 4, 2003	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Dale R. Clark 81 Timberline Drive Bozeman, MT 59718				FILING AND EXAMINATION FEES: \$ 4,382.00 DATE 10/27/06 CERTIFICATION FEE: \$ 768.00 DATE 10/9/07	
11. TELEPHONE (Include area code) 406-587-1218		12. FAX (Include area code) 406-586-8247		13. E-MAIL dclark@westbred.com	
14. CROP KIND (Common Name) Barley		16. FAMILY NAME (Botanical) Poaceae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Hordeum vulgare		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)				20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23)	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Exhibit F. Declaration Regarding Deposit g. <input checked="" type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) h. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO November 15, 2005 IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)					

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER Dale R. Clark for WestBred, LLC		SIGNATURE OF OWNER	
NAME (Please print or type) Dale R. Clark		NAME (Please print or type)	
CAPACITY OR TITLE Director of Research	DATE Oct. 24, 2006	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

200700010

Chico  
Spring Barley

19. a. Exhibit A. Origin and Breeding History

Chico was selected from a Male Sterile Facilitated Recurrent Selection Population (MSFRSP) that had its basis in Composite Cross XXXII. CCXXXII was developed by Dr. R.T. Ramage, USDA/ARS barley geneticist at Tucson, Arizona. WestBred used this base population to develop other populations that had numerous other varieties or selected lines, including disease resistant lines, crossed onto the populations.

The final cross for this selection was made near Phoenix, AZ in 1991. Short plants in WestBred's base populations were top-crossed with the select advanced lines DA 588-1, DA 588-70, DA 588-80 and BZ 588-335. These lines had previously been selected for disease resistant traits (resistance to scald, net blotch, mildew and or Barley Yellow Dwarf Virus). However, the yield and/or other agronomic characteristics of these lines were not sufficient for variety release. (The 'DA' designation indicates the lines were selected from a single row planted near Davis, CA in WestBred's disease screening nursery.)

The F1 was grown near Bozeman, MT in the summer of 1991. F2 seed was planted near Phoenix in the fall of 1991 and F2 spikes were selected in May, 1992. The F2 spikes were planted in single, F3 rows near Bozeman in May, 1992. Single spikes were again selected in September, 1992 and planted as single, F4 rows near Davis, CA in November, 1992. These rows were observed for resistance to scald, net blotch, mildew and Barley Yellow Dwarf Virus, and for resistance to lodging. Resistant rows were selected, harvested in May, 1993 and planted as a single F5 plots near Bozeman in May, 1993. One such selected row was designated 'DA 593-078'. The F5 plot was harvested in September, 1993 and seed from this plot planted in WestBred's Arizona and California preliminary yield trial nurseries in the fall of 1993. DA 593-078 has been tested in Arizona trials from 1994 through 2005. It has short stiff straw and is often the only variety not lodged when lodging conditions occur.

Single heads were selected from the F13 generation near Yuma, AZ in May, 2001. These were planted as single head rows near Yuma in the fall of 2001. Seed from uniform head rows were bulk harvested in May, 2002 and used to plant a small increase block near Bozeman in May, 2002. Seed from this block was harvested in September, 2002 and used to plant approximately 2 acres near Bozeman in May, 2003. This seed was harvested as pre-Breeders seed in



# Chico

200700019

## Spring Barley

September, 2003 and used to plant approximately 5 acres near Yuma in the fall of 2003 and harvested in May, 2004. This seed was designated 'Breeders' seed. This seed was used to plant approximately 80 acres near Yuma in November 2004. At this time, the variety was given the name 'Chico'. This field was harvested in May, 2005 as Foundation seed. The first unencumbered sale of Chico occurred in November, 2005.

Head rows will be planted by WestBred, LLC as needed to maintain Breeders seed. Breeder's seed will be planted to produce Foundation seed.

A taller (4-8 inches taller) variant may occur at a frequency of up to .04% (4 per 10,000 plants). Otherwise, no other variants are known to occur, and Chico is a stable and uniform variety in appearance and performance across several generations (F5-F12) and environments.

### 19. b. Exhibit B. Statement of Distinctiveness

Chico is most similar to the variety Nebula. However, seed of Chico has a white or colorless aleurone and has short rachilla hairs, whereas seed of Nebula has a blue aleurone and long rachilla hairs. These differences, along with a complete Objective Description show Chico to be a new and unique variety of spring barley.





200700019

September 26, 2007

Mark A. Hermeling, Senior Plant Variety Examiner  
Plant Variety Protection Office  
NAL BLDG., Room 401  
10301 Baltimore Avenue  
Beltsville, Maryland 20705-2351

**SUBJECT: Application No. 200700019, Barley, 'Chico'**

Dear Mr. Hermeling,

In answer to your question regarding 'EXHIBIT A. Origin and Breeding History of the Variety:', I submit the following:

The following statement in the Breeding History,

"The final cross for this selection was made near Phoenix, AZ in 1991. Short plants in WestBred's base populations were top-crossed with the select advanced lines DA 588-1, DA 588-70, DA 588-80 and BZ 588-335. These lines had previously been selected for disease resistant traits (resistance to scald, net blotch, mildew and or Barley Yellow Dwarf Virus)."

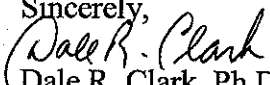
Should be amended to, "These lines had previously been selected, from WestBred's base CCXXXII population, for resistance to various diseases (scald, net blotch, mildew and/or Barley Yellow Dwarf Virus)."

Following is a description of the original CCXXXII.

Several barley Composite Cross's were developed by Dr. R.T. Ramage, who was a USDA/ARS Barley Geneticist and Cytogeneticist. Dr. R.T. Ramage was stationed at Tucson, Arizona from 1956 until his retirement in the mid 1990's. Composite Cross XXXII was initiated to develop short straw, lodging resistant germplasm that would be distributed to barley breeders around the world. Over a period of about 10 years, several versions of this composite were released and seed was sent to the National Small Grains Germplasm Storage Center at Aberdeen, ID. References for the release of two of these releases, CCXXXII-76 and CCXXXII-78 are - Barley Newsletter, volume 19:9-11, and Barley Newsletter, volume 21:5-6).

Please let me know if you need any further clarification.

Sincerely,

  
Dale R. Clark, Ph.D.  
Director of Research  
[dclark@westbred.com](mailto:dclark@westbred.com)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY  
Barley (*Hordeum vulgare* L.)

NAME OF APPLICANT (S) WestBred, LLC	TEMPORARY OR EXPERIMENTAL DESIGNATION DA 593-078	VARIETY NAME Chico
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 81 Timberline Drive Bozeman, MT 59718		FOR OFFICIAL USE ONLY PVPO NUMBER 200700019

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (i.e.    or   ) when the number is either 99 or less or 9 or less.

1. GROWTH HABIT:

1 = Spring 2 = Facultative Winter 3 = Winter Early Growth:  1 = Prostrate 2 = Semi-Prostrate 3 = Erect

2. MATURITY: (50% Flowering)

1 = Early (California Mariout) 2 = Mid-Season (Betzes) 3 = Late (Frontier)  
   No. Days Earlier Than max \*  
 Same as Check Baretta Nebula \*  
   No. of Days Later Than WestBred Barcott \*

3. PLANT: (From Soil Level to Top of Head)

1 = Semi-Dwarf 2 = Short (California Mariout) 3 = Medium Tall (Betzes) 4 = Tall (Conquest)  
  cm Shorter Than Nebula \*  
 Same as Check \*  
  cm Taller Than Poco \*

4. STEM:

Exsertion (Flag to Spike at Maturity): 1 = (0 - 3 cm) 2 = (3 - 10 cm) 3 = (10 - 15 cm)  
 Anthocyanin: 1 = Absent 2 = Present  
  No. of Nodes (Originating from Node Above Ground)  
 Collar Shape: 1 = Closed 2 = V-Shaped 3 = Open 4 = Modified Closed or Open  
 Shape of Neck: 1 = Straight 2 = Snaky 3 = Other (Specify) \_\_\_\_\_

\* A commercial variety grown in the same trial.

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## 5. LEAF:

- 1 Basal Leaf Sheath (Seedling): 1 = Glabrous 2 = Pubescent
- 2 Position of Flag Leaf (At Boot Stage): 1 = Drooping 2 = Upright
- 2 Waxiness: 1 = Absent (Glossy) 2 = Slightly Waxy 3 = Waxy
- 1 5 mm Width (First Leaf Below Flag Leaf)
- 2 4 cm Length (First Leaf Below Flag Leaf)
- 1 Anthocyanin in Leaf Sheath: 1 = Absent 2 = Present

## 6. HEAD:

- 2 Type: 1 = Two-Rowed 2 = Six-Rowed
- 2 Density: 1 = Lax 2 = Erect (Not Dense) 3 = Erect (Dense) 4 = Other (Specify) \_\_\_\_\_
- 2 Shape: 1 = Tapering 2 = Strap 3 = Clavate 4 = Other (Specify) \_\_\_\_\_
- 2 Waxiness 1 = Absent (Glossy) 2 = Slightly Waxy 3 = Waxy
- 1 Lateral Kernels Overlap: 1 = None 2 = At Tip 3 = 1/4 - 1/2 of Head
- 3 Rachis (Hair on Edge): 1 = Lacking 2 = Few 3 = Covered

## 7. GLUME:

- 2 Length: 1 = 1/3 of Lemma 2 = 1/2 of Lemma 3 = More than 1/2 of Lemma
- 2 Hairs: 1 = None 2 = Short 3 = Long
- 4 Hair Covering: 1 = None 2 = Restricted to Middle 3 = Confined to Band 4 = Completely Covered
- 3 Awns: 1 = Less than Equal to Length of Glumes 2 = Equal to Length of Glumes 3 = More than Equal to Length of Glumes
- 3 Awn Surface: 1 = Smooth 2 = Semi-Smooth 3 = Rough

## 8. LEMMA:

- 5 Awn: 1 = Awnless  
2 = Awnlets on Central Rows, Awnless on Lateral Rows  
3 = Short on Central Rows, Awnlets on Lateral Rows  
4 = Short (Less than Equal to Length of Spike)  
5 = Long (Longer than Spike)  
6 = Hooded
- 4 Awn Surface: 1 = Awnless 2 = Smooth 3 = Semi-Smooth 4 = Rough
- 1 Teeth: 1 = Absent 2 = Few 3 = Numerous
- 1 Hair: 1 = Absent 2 = Present
- 1 Shape of Base: 1 = Depression 2 = Slight Crease 3 = Transverse Crease
- 1 Raachilla Hairs: 1 = Short 2 = Long

## 9. STIGMA:

- 2 Hairs: 1 = Few 2 = Many

## 10. SEED:

<input type="text" value="2"/>	Type:	1 = Naked	2 = Covered
<input type="text" value="1"/>	Hairs on Ventral Furrow:	1 = Absent	2 = Present
<input type="text" value="3"/>	Length:	1 = Short (8.0 mm) 2 = Short to Mid-Long (7.5 – 9.0 mm) 3 = Mid-Long (8.5 – 9.5 mm) 4 = Mid-Long to Long (9.0 – 10.5 mm) 5 = Long (10.0 mm)	
<input type="text" value="3"/>	Wrinkling of Hull:	1 = Naked	2 = Slightly Wrinkled    3 = Semi-Wrinkled    4 = Wrinkled
<input type="text" value="1"/>	Aleurone Color:	1 = Colorless (White or Yellow)	2 = Blue
<input type="text" value="01"/>	Percent Abortive	<input type="text" value="38"/>	GMS. per 1000 Seeds

## 11. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Intermediate, 4 = Tolerant)

<input type="text" value="0"/>	Septoria	<input type="text" value="4"/>	Net Blotch	<input type="text" value="0"/>	Spot Blotch	<input type="text" value="4"/>	Powdery Mildew
<input type="text" value="1"/>	Loose Smut	<input type="text" value="3"/>	Bacterial Blight	<input type="text" value="0"/>	Covered Smut	<input type="text" value="0"/>	False Loose Smut
<input type="text" value="0"/>	Stern Rust	<input type="text" value="1"/>	Leaf Rust	<input type="text" value="0"/>	Scab	<input type="text" value="4"/>	Scald
<input type="text" value="0"/>	Aster Yellows Virus	<input type="text" value="0"/>	BSMV	<input type="text" value="3"/>	BYDV	<input type="text" value="0"/>	Other (Specify) _____

## 12. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Intermediate, 4 = Tolerant)

<input type="text" value="0"/>	Green Bug	<input type="text" value="0"/>	English Grain Aphid	<input type="text" value="0"/>	Chinch Bug	<input type="text" value="0"/>	Armyworm
<input type="text" value="0"/>	Grasshoppers	<input type="text" value="0"/>	Cereal Leaf Beetle	<input type="text" value="0"/>	Other (Specify) _____		
Hessian Fly Races {		<input type="text" value="0"/>	GP	<input type="text" value="0"/>	A	<input type="text" value="0"/>	B
		<input type="text" value="0"/>	D	<input type="text" value="0"/>	E	<input type="text" value="0"/>	F
						<input type="text" value="0"/>	Other (Specify) _____

## 13. CHEMICAL: (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Intermediate, 4 = Tolerant)

<input type="text" value="0"/>	DDT	<input type="text" value="0"/>	Other (Specify) _____
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## 14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Tillering	Nebula	Seed Size	Poco
Leaf Size	Nebula	Coleoptile Elongation	Poco
Leaf Color	Nebula	Seedling Pigmentation	Nebula
Leaf Carriage	Nebula		

## REFERENCES:

The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

- Wiebe, G.A., and D.A. Reid, 1961, Classifications of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Department of Agriculture.
- Reid, D.A., and G.A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Department of Agriculture, pp. 61-84.
- Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.



**Chico**  
**Spring Barley**

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19. d. Exhibit D. Additional description of the Variety.

Table 1. Agronomic characteristics of Chico compared to check varieties.

<u>Summary of Small Grain Variety Characteristics for Arizona (2005 &amp; 2006)</u>							
<u>Variety</u>	<u>Grain Yield</u> <u>lbs/ac</u>	<u>Test Weigh</u> <u>lbs/bu</u>	<u>Kernel Wt.</u> <u>grams/1000</u>	<u>Plant Ht.</u> <u>inches</u>	<u>Lodging</u> <u>%</u>	<u>Heading</u> <u>date</u>	<u>Maturity</u> <u>date</u>
<b>Chico</b>	<b>6309</b>	<b>52.9</b>	<b>38</b>	<b>28</b>	<b>0</b>	<b>17-Mar</b>	<b>26-Apr</b>
WB Barcott	5375	50.9	41	32	16.5	6-Mar	12-Apr
Nebula	6259	53.4	47	33	13.5	16-Mar	25-Apr
Baretta	6588	52.65	45	32	15	17-Mar	25-Apr
Commander	6259	51.75	43	32	11.5	20-Mar	27-Apr
Max	6479	52.5	44	31	19	23-Mar	1-May
Mucho	5621	52.35	48	29	10.5	9-Mar	19-Apr
Poco	4546	51.4	38	22.5	0	23-Feb	4-Apr

Data from cooperative trials conducted by WestBred, Arizona Plant Breeders, World Wide Wheat and Mike Ottman with the Univ. of Arizona, Dept of Plant Science.



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)  WestBred, LLC	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER  DA 593-078	3. VARIETY NAME  Chico
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  81 Timberline Drive Bozeman, MT 59718	5. TELEPHONE (Include area code)  (406) 587-1218	6. FAX (Include area code)  (406) 586-8247
7. PVPO NUMBER		200700019

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.



YES



NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.



YES



NO

10. Is the applicant the original owner?



YES



NO

If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?



YES



NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?



YES



NO

If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

EXHIBIT F  
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S) WestBred, LLC	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 81 Timberline Drive Bozeman, MT 59718	TEMPORARY OR EXPERIMENTAL DESIGNATION DA 593-078
NAME OF OWNER REPRESENTATIVE (S) Dr. Dale R. Clark	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 81 Timberline Drive Bozeman, MT 59718	VARIETY NAME Chico
		FOR OFFICIAL USE ONLY
		PVPO NUMBER 200700010

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Dale R. Clark  
Signature

Oct 24, 2006  
Date

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